



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,552	07/31/2001	Bing Lin Yang	YKI-0072	4384
23413	7590	03/02/2004	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			MACCHIAROLO, PETER J	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/919,552	YANG, BING LIN	
	Examiner	Art Unit	
	Peter J Macchiarolo	2875	<i>AW</i>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1203 0703</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Request for Continued Examination filed on December 10, 2003 is acceptable and an action on the Amendment filed October 27, 2003 follows.
2. The reply filed on October 27, 2003 consists of changes to the specification and to the claims, and further, the reply consists of remarks related to the prior rejection of claims in the previous Office Action. The above have been entered and considered. However, pending claims 1, 2, 4, and 5 are not allowable as explained below.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 12/10/2003 and 07/18/2003 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the Examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wijenberg et al (USPN 6,259,205; "Wijenberg") in view of Pollard (USPN 3,916,241; "Pollard").

5. In regards to claims 1 and 4, Wijenberg discloses in figure 2, an illuminant for a discharge lamp comprising a housing (31) constructed from a cylindrical transparent material having equal inner radii at both open ends, a pair of discharge electrodes (4, 5) placed to oppose each other separated by a predetermined gap, and sealing spacers (32a, 34, 10 and 32b, 35, 10) each of which having an outer radius approximately equal to or slightly smaller than the inner radius of the housing, and onto which respective electrode axis of each discharge electrode is fixed, the fixing position of the sealing spacer being adjustable along the axial direction of the housing, and the sealing spacers being fixed to the housing at a condition where a discharge gas fills the discharge chamber at positions where the discharge electrodes are separated by a predetermined gap (Ea), and a projection section (4c, 5c) for discharge start up is provided on the discharge electrode.

6. Wijenberg is silent to the discharge electrodes having a concave section for loading an additive material.

7. However, Pollard teaches a discharge electrode that has a concave section that is adapted for loading an additive material (7) is a simpler and less costly configuration than the prior art electrodes to lower starting voltage¹. One would therefore be motivated to use Pollard's discharge electrodes in Wijenberg's illuminate for a variety of reasons, including material availability, reduction of cost, and manufacturing methods with sensitive requirements.

8. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Wijenberg's illuminate for a discharge lamp, including Pollard's discharge electrodes having a concave section for loading an additive material.

9. **Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niimi et al (JP 2000-268774; "Niimi") in view of Pollard (USPN 3,916,241; "Pollard").**

10. In regards to claims 2 and 5, Niimi discloses in figure 1, an illuminant for a discharge lamp comprising a housing (1) constructed from a cylindrical transparent material having equal inner radii at both open ends, a pair of discharge electrodes (3) each of which has an outer radius approximately equal to or slightly smaller than the inner radius of the housing, the discharge electrodes being placed to oppose each other and having their fixing position within the housing adjustable along the axial direction of the housing, wherein the electrodes are fixed within the housing, with a discharge gas filling the discharge chamber defined by the housing and the discharge electrodes and at position where the discharge electrodes are separated by a

¹ Pollard, col. 1, ll. 33-37; col. 1, ll. 56-59.

Art Unit: 2875

predetermined gap, and a projection section (2) for discharge start up is provided on the discharge electrode.

11. Niimi is silent to the discharge electrodes having a concave section for loading an additive material.

12. However, Pollard teaches a discharge electrode that has a concave section that is adapted for loading an additive material (7) is a simpler and less costly configuration than the prior art electrodes to lower starting voltage². One would therefore be motivated to use Pollard's discharge electrodes in Niimi's illuminate for a variety of reasons, including material availability, reduction of cost, and manufacturing methods with sensitive requirements.

13. Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct Niimi's illuminate for a discharge lamp, including Pollard's discharge electrodes having a concave section for loading an additive material.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375.

The examiner can normally be reached on 7.30 - 4:30, M-F.

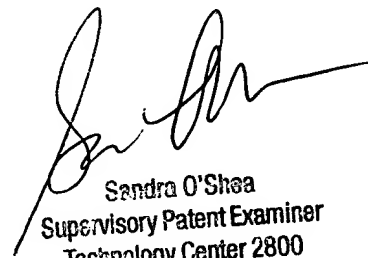
² Pollard, col. 1, ll. 33-37; col. 1, ll. 56-59.

Art Unit: 2875

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

17. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pjm



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800